The output of the motion compensator **50** is applied to the adders **8a, 8b** by refresh switches RSW2 and RSW1, respectively.

The quantized image signal is also supplied to a multi-scanner **80** which scans it according to a plurality of predetermined patterns.

A scanner pattern selector **90** selects the scanning pattern which produces the minimum number of bits to represent the current sub-block. The scanning pattern selector **90** also produces selection data which identifies the selected scanning pattern.

The image signal output by the scanning pattern selector **90** is variable length coded by a variable length coder **60**. The variable length coder **60** compresses the image signal output by the scanning pattern selector **90**. The variable length coder **60** operates such that a large proportion of the data samples are each represented by a small number of bits while a small proportion of the data samples are each represented by a large number of bits.

When a discrete cosine transformed image signal is quantized and runlength coded, the number of "0"s is increased over all, while the number of "0"s decreases as the magnitude of the signal increases. Accordingly, data compression is achieved because "0" can be represented by only a few bits and "255" can be represented by a relatively large number of bits.

Both the variable length coded signal and the selection data are supplied to a multiplexer MUX1 which multiplexes the variable length coded signal and the selection data, and optionally additional information such as teletext.

Since the variable length coded signal has data words of different lengths, a transfer buffer **70** is employed to temporarily store the multiplexed signal and output it at a constant rate.

The original image signal is reconstructed at a remote station by performing the appropriate inverse scanning of the runlength coded signal in accordance with the multiplexed scanning pattern selection data.

FIGS. **3A** to **3H** show possible scanning patterns employed by the multi-scanner **80**. Additional scanning patterns will be apparent to those skilled in the art. However, if the number of patterns becomes too large, the coding efficiency is degraded as the selection data word begins to take longer.

As described above, according to the present invention, the quantized image signal is scanned according to various scanning patterns, and then the most efficient pattern is selected. A suitable measure of efficiency is the number of bits required to runlength code the image signal.

What is claimed is:

1. A signal compressing system, comprising:

coding means for simultaneously scanning a first signal according to a plurality of different scanning patterns to provide respective coded versions thereof;

selection means for selecting one of said scanning patterns which produces efficient sub-block coding according to a predetermined criterion and for outputting a scanning pattern signal identifying the selected scanning pattern and the selected coded version of said first signal; and

a variable length coder to variable length code the received selected coded version of said first signal which is produced by scanning according to the selected scanning pattern.

2. A system according to claim **1**, wherein the coding means codes the first signal according to a runlength coding regime.

3. A system according to claim **2**, further comprising discrete cosine transformer means to produce said first signal.

4. A system according to claim **2**, further comprising a discrete cosine transformer generating said first signal.

5. A system according to claim **1**, further comprising discrete cosine transformer means for producing said first signal.

6. A system according to claim **5**, wherein said transformer means is a motion-compensated interframe adaptive discrete cosine transformer.

7. An image data compressing system comprising:

means for obtaining a difference between the present frame and a preceding motion-compensated frame of an image signal;

means for coding the difference by discrete cosine transform coding and quantizing the discrete cosine transform coded image signal difference and inverse discrete cosine transform coding the quantized image signal;

means for compensating motion of the image signal;

means for coding the quantized image signal by variable length coding;

a selector for selecting an appropriate image scanning pattern from at least one of a plurality of image scanning patterns;

a multi-scanner for simultaneously scanning the quantized image signal by various said scanning patterns;

a scanning mode selector for selecting a scanning mode in which a number of bits produced from a start to an end of a data sub-block is minimized, wherein said means for coding the image signal output of the scanning mode selector by way of variable length coding; and

a multiplexer for multiplexing the variable length coded signal and the scanning pattern selecting signal output by the scanning pattern selector and for outputting the multiplexed signal.

8. A signal compressing system for coupling a first signal representing a video signal to a first coder as a selected coded signal, said system comprising:

a second coder for simultaneously scanning said first signal according to a plurality of different scanning patterns and producing respective coded signals; and

a selector receiving said coded signal for selecting one of said scanning patterns based upon a predetermined sub-block selection criterion and for outputting a scanning pattern signal identifying the selected scanning pattern and said selected coded signal.

9. A system according to claim **8**, wherein said second coder codes said first signal according to a runlength coding regime.

10. The system according to claim **9**, wherein said first coder comprising a variable length coder to variable length code said selected coded signal.

11. The system according to claim **9**, further a comprising discrete cosine transformer for generating said first signal.

12. The system according to claim **8**, wherein said first coder comprising a variable length coder to variable length code the received selected coded signal.

13. The system according to claim **12**, further comprising a discrete cosine transformer producing said first signal.

14. The system according to claim **13**, wherein said transformer comprises a motion-compensated interframe adaptive discrete cosine transformer.

15. The system according to claim **8**, further comprising a discrete cosine transformer producing said first signal.

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